

Product Brief

**Intel® Pentium® M Processor (90nm) with
Intel® 3100 Chipset Development Kit**

Embedded Computing



Intel® Pentium® M Processor (90nm) with Intel® 3100 Chipset Development Kit

Product Overview

The Intel® Pentium® M Processor (90nm) with Intel® 3100 Chipset Development Kit is an excellent platform for a variety of embedded and communications infrastructure applications. The platform enables outstanding instruction execution/watt while providing scalability with Intel® Celeron® M and Intel® Pentium® M processors on 90-nanometer (nm) process. The Intel® 3100 chipset combines server-class memory and I/O controller functions into a single component, creating the first integrated Intel® chipset specifically optimized for embedded, communications and storage applications. When combined with Intel® processors, the chipset addresses developers' needs for high-performance, high-reliability, low-power designs within small form factors such as PrAMC, CompactPCI*, and COMExpress*.

The Intel 3100 chipset integrates PCI Express* serial I/O technology and DDR2 memory technology to increase I/O bandwidth and reduce system latency for data-intensive applications. The 400 MHz front-side bus provides support for Intel Pentium M and Celeron M processors, as well as an upgrade path¹ to future use with next-generation Intel® dual-core processors. The chipset includes a four-channel Enhanced Direct Memory Access (EDMA) controller, providing low-latency, high-throughput data transfer capability with no CPU intervention for higher overall system performance. It also integrates I/O controller features such as Serial ATA, PCI and USB, saving board real estate and power by removing the need for a separate, legacy I/O bridge chip.

This and other development kits from Intel provide a fully working system with a range of performance options that can be modified or used immediately for product development. They also provide a validated board platform for software vendors to test BIOS and operating system software.



Product Highlights

Development Board

- Support for the following processors:
 - Intel Pentium M processor 745^A (1.8 GHz) 2 MB L2 Cache
 - Intel Pentium M processor Low Voltage 738^A (1.4 GHz) 2 MB L2 Cache
 - Intel Celeron M processor Ultra Low Voltage 373^A (1.0 GHz) 512 KB L2 Cache
 - Intel Celeron M processor 370^A (1.5 GHz) 1 MB L2 Cache
- 400 MHz front-side bus
- Support for integrated Intel 3100 chipset
- DDR2-400 MHz registered ECC for up to 4 GB of system memory
- One on-board PCI ATI RAGE Mobility* video chip (if on-board chip is not present, will include a video card kit)
- LPC bus Super I/O controller
- Support for USB 2.0 devices
- Four USB ports; UHCI or EHCI configurations

Product Highlights (continued)

- Two serial ports
- One parallel port
- Total of six SATA interfaces (six utilized in AHCI mode; four utilized in enhanced IDE mode)
- One floppy drive interface
- PS/2 keyboard and mouse ports
- Intel® BIOS support for Advanced Configuration and Power Interface (ACPI), plug and play, SMBIOS and Intel® Active Management Technology (Intel® AMT)
- Three PCI Express x4 bus add-in card connectors
- One PCI 32/33 bus add-in card connector, Specification 2.3

Included in the Kit

- Intel 3100 chipset-based development board
- Intel Pentium M processor 745 (1.8 GHz) 2 MB L2 Cache
- CPU heat sink
- Two DDR2-400 MHz DIMM 1 GB registered ECC memory sticks

- Graphics card (Sapphire PCI using ATI Radeon® 7000 device with 64 MB memory)
- Dual-port PCI Express Gigabit network interface card
- Drivers CD
- One ATX 12V 450W power supply
- Pre-installed jumpers
- Cable set
- Firmware hub, socketed and flashed with the BIOS

Software Overview

In order to provide customers with a complete development environment in the development kit, Intel works to help enable the platform to support customer applications and operating systems. Any software/firmware provided in the kit is subject to change without notice. For the most recent updates, please refer to the Web site for embedded Intel® architecture development kits at developer.intel.com/design/intarch/devkits/index.htm.

Ordering Information

IPDPM3100DEVKIT

¹ Not a scalable transition

⁴ Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See http://www.intel.com/products/processor_number for details.

Intel Access

Embedded Intel® Architecture Home Page:	intel.com/design/intarch
Developer's Site:	developer.intel.com
Intel in Communications:	intel.com/communications
General Information Hotline:	(800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST
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